REMARKS

Claims 8-13 are pending.

Claims 8-13 are rejected.

Please note that a Preliminary Amendment was filed canceling **claims 1-6** and entering **claims 7-12.** There appears to be an error in the claim numbering in the Office action wherein **claims 7-12** are called out as **claims 8-13**.

Grounds of Rejection

Claims 8 and 9 (presumed to be claims 7 and 8) are rejected under 35 USC 102(a) as being anticipated by Zhang et al. (WO98/54012).

Claim 10 (presumed to be claim 9) is rejected under 35 USC 103(a) as being unpatentable over Zhang and further in view of Kono (JP01297306), Verdier (US 3,464,477) and Mezzanotte (EP 0,385,192).

Claim 11 (presumed to be claim 10) is rejected under 35 USC 103(a) as being unpatentable over Hoshino (US 3,954,131) and further in view of Poque (US 4,024,901) and Alie (EP 0,287,497).

Claim 12 (presumed to be claim 11) is rejected under 35 USC 103(a) as being unpatentable over Hoshino, Poque, and Alie and further in view of Verdier (US 3,464,477) and Mezzanotte (EP 0,385,192)

Claim 13 (presumed to be claim 12) is rejected under 35 USC 103(a) as being unpatentable over Hoshino, Poque, And Alie and further in view of Zhang.

Traversing the Rejection

The present invention generally relates to two-ply runflat tires in which the first (inner) ply is reinforced with more or less radially aligned metal wires or cords ... During runflat operation, this steel-reinforced first ply is subjected to cyclical compressive forces because it lies on the compression side of the neutral bending axis within the wedge-insert-reinforced sidewall regions... (paragraph bridging pages 10-11).

In Figures 2A and 2B, the inner ply 54 is shown reinforced with metal wires (monofilaments) or cords 56. In Figure 2B, the tire is shown being bent or deflected due to the radially directed compressive forces F which represent the loadings upon the sidewalls of the uninflated tire sidewall during runflat operation. The bending effect of the load F upon the sidewall segment 50 shown in **FIGURE 2B** is such that the metal-reinforced first or inner ply 54 is subjected to compressive stresses while the second outer ply 58 is subjected to tensile stresses. The neutral bending axis **A-A** lies between the two plies, but in a specific location described below. (page 11, lines 23-33)

The present invention relates to the use of circumferentially disposed fabric treatments, as a way to provide anti-buckling support for the metal reinforcing wires or cords **56** of the first ply **54**. Two types of fabric treatment are described hereinafter. (page 15, lines 13-16)

With reference to Figure 3, the inventive feature of the present invention comprises the incorporation of two fabric layers **74,76**. The first fabric layer **74** is disposed between the inner liner **72** and the first ply **66** while the second fabric layer **76** is disposed between the first ply and the wedge insert **64**.

(page 15, line 30 through page 16, line 1)

Each of the fabric treatment layers **74,76** shown in **FIGURE 3** comprises parallel-aligned cords which are oriented at angles of between 20 and 50 degrees and preferably between angles of 30 degrees and 45 degrees with respect to the circumferential direction. Typically, the fabric layer is made of materials from the group of materials that include nylon, polyester, aramid and rayon. The cords constructed to have diameters of between 0.2 millimeters (mm) and 1.5 mm, preferably between 0.3 mm and 1.0 mm. The cord density is 15 to 50 ends per inch (epi) and preferably 20 to 35 ends per inch. If the angle of the cords in the treatment layers **74,76** is less than 20°, the fabric prevents the tire from being blown up subsequent to construction of the tire on the building drum. Alternatively, if the angle is more than 50°, the fabric has a negligible effect on preventing buckling in the circumferential direction during runflat operation as described hereinafter. The angles of the respective cords within each fabric treatment **74,76** are opposite to one another about the radial direction, which is to say they are crossed with respect to one another. Thus, it follows that the fabric layers **74,76** effectively attach or "tie" to one another each of the radially oriented metallic wires or cords **70** within the first ply **66**. The benefit thereby derived is such that no single reinforcing cord **70** can easily commence a circumferentially directed buckling without pulling along with it the most immediately adjacent reinforcing cords of the first ply **66**. Buckling of the metal reinforcing wires or cords **70** is thereby inhibited during runflat operation wherein the wires or cords are subjected to maximal compressive loading. (page 16, line 10 through page 17, line 4)

The radial height **H** denoted in **FIGURE 3** represents the portion of the sidewall's overall height within which the fabric layers **74,76** are disposed. The height **H** corresponds to between 20 percent and 80 percent of the maximum radial reach, i.e. the length when the wedge insert is straightened out, and preferably between 40 percent and 60 percent of the radial reach of the wedge insert. (page 17, lines 5-11)

Figure 4 illustrates an alternate embodiment of the invention wherein a single woven fabric layer, placed in direct contact with the first ply **66**, will provide the same anti-buckling benefit ... In this alternative embodiment of the present invention, the inventive feature comprises a single woven fabric layer **92**, which is disposed between the inner liner **90** and the first ply **84**. Notice that the woven fabric layer **92**, located axially inward of the first ply **84**, is most advantageously located with regard to inhibiting the above-described circumferential buckling potential of the metallic cords **88** of the first or inner ply **84**. (paragraph bridging pages 17-18).

With respect to the embodiment where fabric layers are on both sides of the inner ply, the Examiner relies primarily on Zhang which discloses filler inserts 42, 46 which may be cord-reinforced (Fig. 4) or loaded with short fibers (Fig. 5). Zhang's fillers are elastomeric and essentially crescent-shaped (thin at the radial ends, thicker in the middle), as is common for fillers. Zhang's fillers are not fabric layers, as claimed herein.

Kono is the primary reference cited against the feature of where the fabric layers are located in the respective sidewall regions having radial width of between 20 percent and 80 percent of the maximum radial reach of the respective wedge inserts. The Examiner notes that the reference places no criticality on this parameter. Applicant respectfully submits that the criticality has been spelled

out in the present application.

> If the height of the fabric layers **74,76** is less than 20 percent of the radial reach of the wedge insert, the fabric layers provide a negligible effect in preventing buckling during runflat operation. Alternatively, if the height **H** of the fabric layers is more than 80% of the radial reach of the wedge insert, its radially inwardmost and outwardmost portions will lie outside of the compression area and will therefore add weight to the tire without adding any corresponding advantage. The fabric layers **74,76** are centered more or less across the radially central area of the circumferentially disposed wedge insert **64**, which is also the region of maximum bending-stress-induced compressive loading of the metal-reinforced first ply **66** during runflat operation. (page 17, lines 11-25)

Verdier and Mezzanotte do not teach or suggest the present invention.

Please note that the newly-presented claims are presented first with a one fabric layer embodiment (claim 14), then the second fabric layer is added as a dependent feature (claim 28). Please note that all of the newly-presented claims are supported by comments set forth herein, either from the specification, or in some cases paralleling canceled claims. Also, for example, compare claim 29 with 15, 30 with 17, 31 with 19, 32 with 21, and 33 with 24.

With respect to the embodiment where there is a fabric layer the inner side of the inner ply, the Examiner relies primarily on Hoshino. Hoshino discloses an elastomeric reinforcement 10 which is disposed at the junction of the sidewall and the tread. It is crescent-shaped, and may have reinforcing layers disposed therein. It is not disposed primarily in the sidewall, and there are no radial carcass plies. Hoshino's tire is a bias tire having "a carcass 5 consisting of bias cords."

The secondary references Poque and Alie. Poque discloses woven fabric 10 for reinforcing the bead and lower sidewall area of the tire, and lacks a wedge insert between two plies. Alie discloses textile layers 6 and 7 wrapping around the bead 2, and they do not extend much into the sidewall of the tire. Alie lacks a wedge insert between two plies.

The inner and outer layers of the present invention are fabric layers. Fabric is essentially planar, not wedge or cresent shaped in cross section.

Independent claim 14 includes a first fabric layer, comprising cords. Various dependent cliams describe features of the cords, the material of the fabric layer, the radial position and width of the fabric layer, and a second fabric layer (claim 28).

Drawing Correction

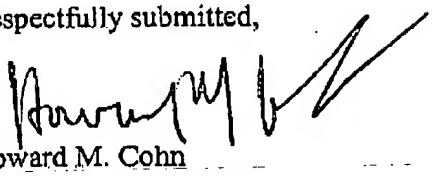
Figure 1 is corrected. The lines to the inner ply 30 and the liner 34 were reversed, two occurrences. See page 9, lines 33-34. The carcass **28** comprises a first of inner ply **30**, a second or outer ply **32**, and a gas-impervious inner liner **34**. See page 9, lines 33-34. After the drawing correction is accepted, a new formal drawing will be filed.

CONCLUSION

No new matter is entered by this amendment.

Due consideration and allowance of this application are respectfully solicited.

Respectfully submitted,



Howard M. Cohn
Registration No. 25,808

Howard M. Cohn, Patent Attorney LLC
21625 Chagrin Blvd. Suite 220
Cleveland, Ohio 44122
(216)752-0955 phone
(216)752-0957 fax

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